

## AMENDMENTS TO THE DRAWINGS

The attached four sheets of drawings include changes to Figs. 1 - 10. These sheets replace the original sheets including Figs. 1 - 10.

## ATTACHMENTS: REPLACEMENT SHEETS.

Replacement sheets for Figs. 1 - 10 are pages 16 to 19 of this paper.

## REMARKS/ARGUMENTS

The amendments and remarks hereto attend to all outstanding issues in the pending office action of 7 April, 2005. Claims 1-20 are pending in this application. Claims 1-10 are amended. Claims 11-20 are new.

### **In the Specification**

The specification visible on PAIR and associated with the date 4/06/2004 appears to be missing its first page, and contains minor changes relative to the version originally filed on 11/13/2003. The remarks below pertaining to the "specification as filed" and the marked-up copy showing changes made in the substitute specification submitted herewith refer to the specification that is shown on PAIR associated with the date 11/13/2003, except for the claims, as noted below.

Applicant has amended the specification by substitute specification pursuant to 37 CFR §§1.121 and 1.125 and MPEP §608.01(q). The amendments include an amendment to the Title and addition of certain subheadings recommended by the USPTO. Certain portions of the specification have been rearranged and/or amended for clarity.

No new matter is added to the application through any of the specification amendments.

### **In the Claims**

The claims visible on PAIR associated with the date 4/06/2004 are different from the claims originally filed on 11/13/2003. Therefore, claims that are used for support of new claims and are noted "as originally filed" are the versions of claims filed on 11/13/2003. However, since the Examiner has directed her remarks to language used in the claims associated with the date 4/06/2004, the claim amendments and remarks pertaining thereto refer to the claims that are shown on PAIR associated with the date 4/06/2004.

All of the claims have been amended to use the term “gliding board” in place of “a ski or snowboard” for clarity, in accordance with the Examiner’s helpful suggestion. Other claim amendments for clarity include use of terms such as “comprising” and “wherein,” and other minor wording changes.

The amendment to claim 1 finds support in the specification as filed at paragraph 4 and in Fig. 2, Fig. 3, Fig. 5 and the detailed descriptions thereof.

The amendment to claim 5 finds support in the specification as filed at paragraph 2.

The amendment to claim 7 finds support in Fig. 6, Fig. 7 and Fig. 9, and the detailed descriptions thereof.

New claims 11-15 are believed to be patentable over the art of record at least because each depends from claims 1, 4 or 7 that are argued below as patentable. Additionally, the art of record does not disclose or suggest:

- edge sections comprising a first and a second material as in claim 11, or comprising composite materials as in claim 12,
- grind plates mounting substantially flush with edges of the board body along the bottom surface of the board as in claim 13, or
- grind plates mounting along a center region of the board body as in claim 14.

New claim 11 finds support in the detailed description of Fig. 10 and in claims 1 and 2 as originally filed.

New claim 12 finds support in the detailed description of Fig. 2, Fig. 3, Fig. 5, Fig. 10 and in claim 2 as originally filed.

New claim 13 finds support in Fig. 6, Fig. 9 and the detailed description of Fig. 9.

New claim 14 finds support in the brief descriptions of Fig. 2 and Fig. 5, and in Fig. 10 (object 8 is beneath a center region of the board body) and the detailed description of Fig. 10.

New claim 15 finds support in the specification as filed at paragraph 5, and in claim 1 as originally filed. Claim 15 is believed to be patentable over the art of record because the art of record, in any combination, does not disclose removing a first set of edge sections from a gliding board, selecting a second set of edge sections for installation on the board, and installing the second set of edge sections on the board.

New claim 16 finds support in Fig. 2, Fig. 3 and Fig. 5 (showing removed edge sections 4.1 and other edges 4 that are not removed) and in the specification as filed at paragraph 5. Claim 16 is believed to be patentable over the art of record at least because it depends from claim 15 which is argued above as patentable over the art of record; furthermore the art of record, in any combination, does not disclose a board configured to utilize a complete set of edge sections, with a first (removed) set of edge sections consisting of fewer sections than the complete set.

New claim 17 finds support in the specification as filed at paragraph 5. Claim 17 is believed to be patentable over the art of record at least because it depends from claim 15 which is argued above as patentable over the art of record; furthermore the art of record, in any combination, does not disclose replacement of a set of edge sections comprising one or more damaged edge sections.

New claims 18 and 19 find support in the specification as filed at paragraph 5. Claims 18 and 19 are believed to be patentable over the art of record at least because they depend from claim 15, which is argued above as patentable over the art of record. Furthermore, the art of record, in any combination, does not disclose replacement of a first set of edge sections with a second set of edge sections having different performance or durability characteristics than the first set.

New claim 20 finds support in the specification as filed at paragraphs 3 and 5. Claim 20 is believed to be patentable over the art of record at least because the art of record, in any combination, does not disclose installing a set of grind plates on a gliding board to protect a set of edges of the board during sliding and grinding of the board, and removing the grind plates from the board for use of the board on snow.

No new matter is added to the application through any of the claim amendments.

## **Response to Office Action**

The following paragraphs follow the order of the paragraphs in the Office Action mailed 7 April 2005 in this application.

### **1. Claim Objections**

Applicant has complied with the Examiner's helpful suggestion to present claim 6 as a single sentence and to remove references to a method in an otherwise apparatus claim, and requests reconsideration and withdrawal of the objection thereto.

### **2. - 7. Claim Rejections - 35 U.S.C. §112**

Claims 1-10 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite.

Claims 6 and 10 recited the phrase "and any other method." This phrase has been removed from claims 6 and 10.

Claims 1-10 recited the phrase "A ski or snowboard." This has been changed to "A gliding board" in accordance with the Examiner's helpful suggestion.

Claims 7-10 recited "a grind plate/s." This has been changed to "[the] one or more grind plates."

Claim 7 recited "top bottom." This phrase has been removed from claim 7.

Applicant believes that the rejections of claims 1-10 under 35 U.S.C. §112, second paragraph, are overcome by the amendments herein, and requests reconsideration and withdrawal of these rejections.

### **8. - 9. Claim Rejections – 35 USC §102(b)**

Claims 1-4 and 6 stand rejected as being anticipated by U.S. Patent No. 2,225,293 ("Bjork"). Applicant respectfully disagrees. To anticipate a claim, the reference must teach every element of the claim and "the identical invention must be shown in as complete detail as is contained in the ... claim." *MPEP 2131* citing *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987) and *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989).

Applicants' claim 1, as amended, requires the following elements:

(1) a board body; and

(2) a plurality of edge sections, each of the edge sections being removable from and replaceable to, the board body.

Bjork teaches "metal runners" that, while interchangeable, are not taught as being removable from and replaceable to a board body. Bjork does not mention removing or replacing the "metal runners" and, in fact, advocates features of these "runners" that could make their removal and/or replacement difficult or impossible. For example: "'I have found it to be necessary to make the runners in sections, each section being secured to the ski entirely independently of the other sections, and the ends of adjacent sections being so formed and so joined as to not only prevent the movement of the end of any section laterally of the ski, but also vertically thereof..." Bjork, page 2, col. 1, lines 55-61, emphasis added. "This interlocking of the ends of adjacent sections relieves the means used in securing each section to the ski..." Bjork, page 2, col. 2, lines 2-4, emphasis added. "The rearward section 17 is provided with a central and forwardly projecting tongue 24 adapted to enter and have a close sliding fit with the channel 18, the end of this tongue being inwardly and forwardly beveled at 25 so as to pass below and interlock with the bevel 21." Bjork, page 2, col.2, lines 30-35. Bjork, therefore, anticipates that the "metal runners" of his ski will "join" and "interlock," features that are not conducive to removal and replacement. Certainly Bjork does not show "the identical invention ... in as complete detail as is contained in the ... claim." We therefore contend that Bjork does not anticipate claim 1, and request reconsideration and withdrawal of the rejection thereof under 35 U.S.C. 102(b).

Claims 2-4 and 6 depend from claim 1 and thus benefit from like arguments; reconsideration and withdrawal of the rejection of claims 2-4 and 6 under 35 U.S.C. 102(b) is likewise requested. However, certain of these claims have additional features that are not anticipated by Bjork. For example, claim 4 requires "the edge sections vary in flexibility." The Examiner states "Bjork teaches varying the thickness of the metal edges (14, 15) as well as varying the flexibility of the metal edges... See column 2, lines

43-48 and column 3, lines 31-61.” Office Action, page 3. Applicant believes the first of these citations to refer to page 2, column 1, lines 43-48: “Great nicety in this arrangement is not required, since any irregularities will be so small as to be negligible. The strip metal used is only about .05 of an inch in thickness, and variation in the thickness of a few thousandths of an inch one way or another would not interfere in any way with the free action of the ski.” Bjork, page 2, column 1, lines 43-49. But this passage does not teach edge sections that vary in flexibility; it teaches that small variation in flexibility are immaterial to the operation of Bjork’s ski. This is reinforced by other passages from Bjork: “Such protecting runners must be made in short lengths and have a degree of resiliency equaling, if not greater than, the wood of the ski itself.” Bjork, page 1, col. 1, lines 34-37. “The construction of the runner and the manner of applying it to the ski is such as to have no weakening effect upon the wood of the ski, but rather to provide a reinforcement along each edge thereof without sacrificing resiliency of the ski as a whole.” Bjork, page 1, col. 2, lines 3-8. “The use of thin metal in the runner is essential because these runners must have as great or greater flexibility than the material of the ski itself, since such flexibility is necessary to the desired action of the ski.” Bjork, page 2, column 1, lines 50-54. The teaching of these passages is that the resiliency or flexibility of the “metal runners” is designed to be at least as great as that of wood of the ski itself; and that in such a context, variation in flexibility does not matter. Therefore Bjork does not teach varying flexibility of an edge. Reconsideration is requested.

Claims 7, 8 and 10 stand rejected as being anticipated by U.S. Patent No. 6,062,585 (“Hess”). Applicant respectfully disagrees. Applicants’ claim 7, as amended, requires the following elements:

- (1) a board body;
- (2) edges; and
- (3) one or more grind plates disposed laterally with respect to the edges, and removably and replaceably attached to the board body.

Hess does not teach grind plates disposed laterally with respect to the edges, and removably and replaceably attached to the board body. First, nowhere does Hess mention “grind plates” or anything to do with grinding skis on obstacles. Hess appears to disclose a ski with “a running surface comprising longitudinal edges, the bottom side of the longitudinal edges essentially consisting of inelastic external edges and a recess provided in the lengthwise direction of the ski between the external edge and the running surface.” Hess, col. 1, lines 6-11. The Examiner does not specify what numbered features of Hess are considered to be “grind plates,” but we contend that no feature of Hess reads on grind plates that are disposed laterally with respect to edges and are removably and replaceably attached to a board body. For example, inspection of Fig. 1 through Fig. 3 of Hess shows that rails 7 and 8 forming edges 4, 5, 9 and 10 are disposed underneath core 2 of ski 1. No grind plates are shown, and certainly no grind plates are shown that are disposed laterally with respect to edges and removably and replaceably attached to a board body. Similarly Fig. 4 through Fig. 15 of Hess show various embodiments of rails 7 and 8 forming edges 9 and 10. Nowhere does Hess show grind plates that are disposed laterally with respect to edges and removably and replaceably attached to a board body. Since Hess does not show such grind plates, Hess does not anticipate claim 7; reconsideration and withdrawal of the rejection of claim 7 under 35 U.S.C. §102(b) is requested. Claims 8 and 10 depend from claim 7 and benefit from like arguments; consideration and withdrawal of the rejection of claim s 8 and 10 under 35 U.S.C. §102(b) is likewise requested.

**10. and 11. Claim Rejections – 35 USC §103(a)**

The following is a quotation from the MPEP setting forth the three basic criteria that must be met to establish a *prima facie* case of obviousness.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach



or suggest all the claim limitations. MPEP §2142, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claim 5 stands rejected as being unpatentable over Bjork in view of U.S. Patent No. 3,097,314 ("Tanahashi"). Applicant respectfully disagrees. First, claim 5 depends from claim 1, argued above as allowable over the art of record. Second, claim 5 as amended requires that "one or more of the edge sections have dull edges for sliding and grinding." Bjork and Tanahashi do not teach or suggest that one or more edge sections have dull edges for sliding and grinding. For both of these reasons, *prima facie* obviousness does not exist for claim 7; Applicant thus requests reconsideration and withdrawal of the rejection of claim 7 under 35 USC §103(a) as unpatentable over Bjork in view of Tanahashi.

Claim 9 stands rejected as being unpatentable over Hess in view of U.S. Patent No. 3,924,865 ("Benner"). Applicant respectfully disagrees. First, claim 9 depends from claim 7, argued above as allowable over the art of record. Second, claim 9 as amended requires that "flexibility of the one or more grind plates accommodates intended use of the board." We note that Benner, like Hess, does not disclose grind plates as required by claim 7: "that are disposed laterally with respect to edges and are removably and replaceably attached to a board body." Therefore neither Hess nor Benner discloses flexibility of the grind plates, and especially not that flexibility of the one or more grind plates accommodates intended use of the board. For both of the first and second reasons noted above, *prima facie* obviousness does not exist for claim 9; Applicant thus requests reconsideration and withdrawal of the rejection of claim 9 under 35 USC §103(a) as unpatentable over Hess in view of Benner.

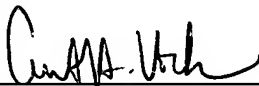
In view of the above Amendments and Remarks, Applicant has addressed all issues raised in the Office Action dated 7 April 2005, and respectfully solicits a Notice of Allowance. Should any issues remain, the Examiner is encouraged to telephone the undersigned attorney.

Applicant has previously applied for a one-month extension of time in this application, and a fee of \$60 has been accepted by the USPTO in connection therewith. An additional fee of \$165 in accordance with the difference between a one-month and a two-month extension of time for a small entity, and the fee of \$100 for one independent claim in excess of three for a small entity, are enclosed herewith. Applicant believes no other fees are currently due, however, if any fee is deemed necessary in connection with this Amendment and Response, please charge Deposit Account No. 12-0600.

Respectfully submitted,

LATHROP & GAGE L.C.

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~~Replaceable, interchangeable edge and grind plate systems for skis and snowboards.~~ **REPLACEABLE, INTERCHANGEABLE EDGE AND GRIND**

**PLATE SYSTEMS FOR GLIDING BOARDS**

~~The present invention relates to skis, snowboards, and other devices that use metal, plastic or composite edges to turn or control the device.~~

**BACKGROUND**

**[0001]** ~~Many different designs have been used to make skies and snowboards as usable and durable as possible. To date, these devices all fail to provide longevity and versatility to the edges. The edges of these devices are permanently attached to the ski or snowboards. The edges frequently become dull or damaged while being used. Once an edged is damaged or has lost its sharpness, the complete ski or snowboard can be placed on a grinder and have the edges re-sharpened. This technique can only be used a few times before the ski or snowboard is useless. If the edge is damaged due to impact with rocks or other hard surfaces it will not only be dulled, but may be bent or broken. This type of damage is costly to repair if it can be repaired at all. Often time ski~~ Ski ~~and snowboard edges are often damaged from sliding or grinding on metal rails, trees, benches and other obstacles. This occurs on a daily basis, as grinding/ and sliding have become a very popular trick~~ tricks ~~among younger skiers and snowboarders. Ski resorts are now regularly putting up obstacles like these up for skiers and snowboarders to do tricks on. These types of tricks destroy the edges. Dull edges do not cut into hard packed snow very well. This is potentially dangerous and reduces the amount of control and life of the skis or snowboard. Sharp edges do not slide or grind well as they tend to dig into or catch on the object being slid upon. The invention is a replaceable edge system and grind plate system for skis and snowboards that directly addresses both problems.~~ Once an edge is damaged or loses its sharpness, a complete ski or snowboard can be placed on a grinder to have the edges re-sharpened. This technique can only be used a few times before the ski or snowboard is useless. If an edge is damaged due to impact with rocks or other hard surfaces, it may not only be dulled, but may be bent or broken. This type of damage is costly to repair if it can be repaired at all.

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[0002] Sharp edges do not slide or grind well, as they tend to dig into or catch on the object being slid upon. The invention is a replaceable edge system and grind plate system for skis and snowboards that directly addresses both problems.

[0003] Many different designs have been used to make skis and snowboards as usable and durable as possible. To date, these devices all fail to provide longevity and versatility to the edges. The edges of these devices are permanently attached to a ski or snowboard. The edges frequently become dull or damaged while being used. There has been no prior attempt to make skis or snowboards more usable and durable in regards to a replaceable edge designed for conventional skiing or snowboarding as well as for sliding or grinding.

[0004] There has been no prior attempt to make skis or snowboards more usable and durable in regards to a replaceable edge designed for conventional skiing or snowboarding as well as for sliding or grinding. There has been one prior attempt to make a removable edge for a snowboard. U.S. patent No. 5,462,304 to Nyman (1995) mainly claims a specific edge design that aids in making snowboarding easier and more predictable for beginners. This edge is specific to his design and is ~~re-moveable~~ removable. Unfortunately his edge design is not applicable to intermediate and advanced snowboarders. This is because the goal for these snowboarders is to have a board that is highly maneuverable or agile and does not have a tendency to lock the rider into a stable position for the sake of control. Nyman also greatly increases the edges surface area over that of conventional snowboard edge. This is a disadvantage to a proficient snowboarder because of the increased friction the edges create, resulting in slower acceleration and slower speeds for snowboarders. Nyman's three saw tooth surfaces and dual acting edge is not applicable to grinding/sliding because of its multiple raised edges that would be prone to catching when the board is being slid across obstacles. Finally, Nyman's edge is only removable in one piece. ~~As far as I am aware there has also never been an attempt to create a grind plate system for skis or snowboards which protects the edges from the damages of sliding and grinding and which can be removed for conventional skiing and snowboarding.~~ one piece.

[0005]     As far as I am aware, there has also never been an attempt to create a grind plate system for skis or snowboards which protects the edges from the damages of sliding and grinding and which can be removed for conventional skiing and snowboarding.

### SUMMARY

[0006]     The present invention relates to skis, snowboards and other devices that use metal, plastic or composite edges to turn or control the device. The purpose of this invention is to provide skis, snowboards and similar devices with replaceable and interchangeable edge sections, and/or a fixed or removable grind plate.

~~The edge sections are specifically designed to provide the optimal edges for conventional skiing and snowboarding and with a change of an edge section, the best edge for sliding or grinding. These edges can be easily removed and replaced for a given activity or due to edge damage. The removable system can adapt to a manufacturers specific design, allowing for it to be used on any current or future ski or snowboard design. Replaceable edges will also provide manufacturers with new design options for their products. This system can also use metal, plastic or composite materials to provide the best edge or combination of edge sections for a given activity, such as rail sliding or a given snow condition, i.e. ice, powder etc... The grind plates are designed to provide protection to a ski and snowboard edge during sliding or grinding. These plates can be made of metal, plastic or composite materials. They can be either permanently attached to a ski or snowboard or made for easy removal and replacement. They are designed to complement the ski or snowboards performance.~~

~~Replaceable edges/sections and grind plates will provide riders with a new level of equipment durability as well as customization, allowing for one pair of skis or a single snowboard to provide greater variety in performance and usability by being ideal for traditional skiing or snowboarding and ideal for sliding and grinding.~~

### **Drawings**

### BRIEF DESCRIPTION OF DRAWINGS

[0007]     Fig. 1 is a side view of the ski or snowboard constructed in accordance with the invention.

**[0008]** Fig. 2 is a side view of a ski or snowboard constructed in accordance with the invention, showing the center edge section removed.

**[0009]** Fig. 3 is an exploded side view of the ski or snowboard ~~in~~of fig. 2.

**[0010]** Fig. 4 is a bottom view of the ski or snowboard ~~in~~of fig. 1.

**[0011]** Fig. 5 is a bottom view of the ski or snowboard ~~in~~of fig. 2, showing the center edge sections removed.

**[0012]** Fig. 6 is a front to back view of a ski or snowboard showing the grind plates attached to the sides.

**[0013]** Fig. 7 is a front to back view of the ski or snowboard ~~in~~of fig. 6, with the grind plates removed.

**[0014]** Fig. 8 is a front to back view of a ski or snowboard grinding or sliding ~~side-way~~sideways on an object.

**[0015]** Fig. 9 is a front to back view of a ski or snowboard with grind plates attached, grinding or sliding ~~side-way~~sideways on an object.

**[0016]** Fig. 10 is a side view of a ski or snowboard grinding or sliding ~~side way~~sideways on an object.

#### **Reference Numerals in Drawings**

##### **REFERENCE NUMERALS IN DRAWINGS**

**[0017]** 1 top

**[0018]** 2 tip

**[0019]** 3 bottom

**[0020]** 4 edge

**[0021]** 4.1 removed edge section

**[0022]** 5 tail

**[0023]** 6 location of removable edge section

**[0024]** 7 grind plates

**[0025]** 8 represents an object a skier or snowboarder could grind or slide on, such as: trees, rails, benches etc...

**[0026]** 9 arrow indicates movement of ski or snowboard from left to right

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[0027] 10 indicates movement of ski or snowboard into page (away from viewer)

#### **Detailed Description of Drawings**

#### DETAILED DESCRIPTION OF DRAWINGS

[0028] Fig. 1 is a side view of a ski or snowboard (e.g., a gliding board) 20 constructed in accordance with the invention. The ski or snowboard of the present invention is shown from a side view in its usable configuration in Fig. 1, and consists of ~~a tip 2, a top 1, a tip 2, a tail 5, a bottom 3, and an edge 4.~~

[0029] Fig. 2 is a side view of a ski or snowboard 20 constructed in accordance with the invention, showing the center edge section removed. Fig. 2 is a side view of the ski or snowboard in Fig. 1. This figure shows a section of edge 4, marked ~~4.14.1~~, removed from its ~~edge section 6, location 6~~ on the ski or snowboard. The ~~top 1, tip 2, bottom 3, top 1, 3~~ and tail 5 are depicted for clarity. The edge sections 4.1 can be made of plastic, metal or composite materials and can be combined in any combination to the ski or snowboard's removable edge section 6. The edge sections are specifically designed to provide the optimal edges for conventional skiing and snowboarding, and, with a change of an edge section, the best edge for sliding or grinding. These edges can be easily removed and replaced for a given activity or due to edge damage.

[0030] The removable system can adapt to a manufacturer's specific design, allowing for it to be used on any current or future ski or snowboard design. Replaceable edge sections 4.1 will also provide manufacturers with new design options for their products. This system can also use metal, plastic or composite materials to provide the best edge or combination of edge sections for a given activity, such as rail sliding, or for a given snow conditions, i.e., ice, powder, etc.

[0031] Fig. 3 is an exploded view of Fig. 2. This figure clearly shows a section of edge 4, marked 4.1 removed from ~~its edge section~~ location 6. The ~~tip 2, top 1, tip 2~~ and tail 5 are indicated for clarity. The removed edge sections 4.1 can be made of

plastic, metal or composite materials and can be combined in any combination to the ski or snowboard's removable edge sections snowboard's location 6.

[0032] Fig. 4 is a bottom view of the ski or snowboard gliding board 20, in its usable configuration, as ~~shown~~ in Fig. 1. This figure shows the tip 2, bottom 3, side edges 4, 4 (in place in the center edge sections 6, locations 6, see FIG. 3) and tail 5 to orient the viewer.

[0033] Fig. 5 is a bottom view of ~~Fig. 2, the ski or snowboard in Fig. 2,~~ showing the edge sections removed. This figure shows sections of the side edges 4, marked 4.1 removed from their ~~edge sections~~ locations 6. The tip 2, bottom 3 and tail 5 are labeled for clarity. The edge sections 4.1 can be made of plastic, metal or composite materials and can be combined in any combination ~~to at~~ the ski or snowboard's removable edge sections snowboard's locations 6.

[0034] Fig. 6 is a front to back view of a ski or snowboard (e.g., a gliding board) 30 with grind plates 7,7 attached outside of the its edges 4. The top 1, bottom 3 and side edges 4 are shown for clarity. The grind plates 7 can be made of plastic, metal or composite materials. The grind plates are designed to provide protection to a ski or snowboard edge during sliding or grinding. These plates can be made of metal, plastic or composite materials. They can be either permanently attached to a ski or snowboard or made for easy removal and replacement. They are designed to complement the ski or snowboard's performance.

[0035] Fig. 7 is a front to back view ~~of~~ of the ski or snowboard ~~in~~ of Fig. 6, showing the grind plates 7,7 removed from the ski or snowboard. The top 1, bottom 3,3 and side edges 4 are shown for clarity. The grind plates 7 can be made of plastic, metal or composite materials.

[0036] Fig. 8 is a front to back representation of a ski or snowboard grinding/ or sliding from left to right 9, on an object 8. This figure shows how the edges 4,4 come into contact with the object 8,8 ~~that~~ the ski or snowboard is grinding/ or sliding on. This is how the edges 4,4 become dull and damaged. The top 1,1 and bottom 3,3 of the ski or snowboard are shown for clarity.



[0037] Fig. 9 is a front to back representation of a ski or snowboard sliding~~/ or~~ grinding from left to right ~~9,2~~ on an object 8. This figure shows how ~~the~~ grind plates ~~7,7~~ work to protect ~~the~~ edges ~~4,4~~ during sliding or grinding. The top 1 and bottom 3 are shown for clarity.

[0038] Fig. 10 is a side representation of a ski or snowboard grinding~~/ or~~ sliding into the page (away from the viewer) 10, on an object 8. This ~~figures~~figure shows why it is of particular interest to have removable edge sections ~~6.4.1~~. This is because during grinding and sliding, the edges ~~4,4~~ incur most damage to the center sections 4.1. It is also of particular interest to make the removed edge sections 4.1 out of different materials. This is because soft metals, plastics and composite materials will work best for grinding or sliding, while; other hard metals, plastics and composite materials work best for conventional skiing or snowboarding. By having the ability to combine both ~~to~~into a single ski or snowboard, a user will get more usability, durability and specificity out of a single pair of skis or a snowboard.

[0039] Replaceable edges/sections and grind plates will provide riders with a new level of equipment durability as well as customization, allowing for one pair of skis or a single snowboard to provide greater variety in performance and usability by being ideal for traditional skiing or snowboarding and ideal for sliding and grinding.

**Abstract**

**ABSTRACT**

**[0040]** A ski or snowboard ~~with~~has removable and interchangeable edge sections. These edge sections are specifically designed to allow ~~a~~the ski or snowboard to have the best edge combination for traditional use as well as for sliding or grinding on objects. ~~The~~A fixed or removable grind plate system protects a ski or ~~snowboards~~snowboard's edges from damages due to sliding or grinding on objects or surfaces.